CLAIMS

All pending claims are reproduced below. No claims are currently being amended, canceled or added.

1. (Previously Presented): An ion generator comprising:

an ion emitter electrode;

a collector electrode; and

a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein the ion emitter electrode is one of (1) slack, (2) curved, and (3) coiled and spans a distance, and wherein the ion emitter electrode has a length that is at least fifteen percent greater than said distance.

2. (Previously Presented): An ion generator comprising:

an ion emitter electrode;

a collector electrode;

a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter electrode is slack and spans a distance, and wherein said ion emitter electrode has a length that is at least fifteen percent greater than said distance.

3. (Canceled):

4. (Previously Presented): The ion generator of claim 2 wherein said length of said ion emitter electrode is between fifteen percent to thirty percent greater than said distance.

5. (Previously Presented): An ion generator comprising:

an ion emitter electrode;

a collector electrode; and

a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter electrode is a coil and spans a distance, and wherein said ion emitter ~~first~~ electrode has a length that is at least fifteen percent greater than said distance.

6. (Previously Presented): The ion generator of claim 5 wherein said ion emitter electrode is at least two times longer than said distance.

7. (Previously Presented): The ion generator of claim 5 wherein said ion emitter electrode is between two to three times longer than said distance.

8. (Previously Presented): An ion generator comprising:

an ion emitter electrode;

a collector electrode; and

a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode;

wherein there is no further electrode located between the ion emitting electrode and the collector electrode; and

wherein said ion emitter electrode has a plurality of curves and spans a distance, and wherein said ion emitter electrode has a length that is at least fifteen percent greater than said distance.

9. (Original): The generator of claim 8 wherein said plurality of curves are in the same plane.

10. (Canceled):

11. (Previously Presented): An ion generator comprising:

a means for emitting ions having a length that is at least fifteen percent greater than a distance that the means spans;

a collector electrode; and

a voltage generator to provide a potential difference between the means for emitting ions and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the means for emitting ions to the collector electrode.

12. (Previously Presented): In an ion generator comprising a ion emitter electrode that spans a distance and a collector electrode, and a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter ~~first~~ electrode to the collector electrode, the improvement including:

said ion emitter electrode being slack so that its length is at least fifteen percent greater than said distance that said ion emitter electrode spans, in order to enhance emissivity.

13. (Previously Presented): In an ion generator comprising an ion emitter electrode that spans a distance and a collector electrode, and a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode, the improvement including:

said ion emitter electrode including a plurality of curves that cause its length to be at least fifteen percent greater than said distance in order to enhance emissivity.

14. (Previously Presented): In an ion generator comprising an ion emitter electrode that spans a distance and a collector electrode, and a voltage generator to provide a voltage potential difference between the ion emitter electrode and the collector electrode in order, when energized,

to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode, the improvement including:

said ion emitter electrode being coiled so that its length is at least fifteen percent greater than the distance that said ion emitter electrode spans, in order to enhance emissivity.

15. (Previously Presented): A method for generating ions including the steps of:

providing an ion emitter electrode that is sufficiently slack, curved or coiled such that its length is at least fifteen percent greater than a distance that said ion emitter electrode spans;

providing a collector electrode; and

providing a voltage generator to provide a potential difference between the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode.

16. -17. (Canceled):

18. (Previously Presented): The generator of claim 1 wherein said ion emitter electrode is positively charged and the collector electrode is negatively charged.

19. (Previously Presented): The method of claim 15, including providing said ion emitter electrode such that its said length is between two to three times longer than said distance.

20. (Previously Presented): A device for conditioning air including

a housing with an air inlet and an air outlet;

an ion emitter electrode;

a collector electrode;

said ion emitter electrode located closer to said air inlet than said collector electrode;

said collector electrode located closer to said air outlet than said ion emitter electrode; and

a potential generator electrically coupled to the ion emitter electrode and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the ion emitter electrode to the collector electrode; and

wherein said ion emitter electrode spans a distance, and wherein said ion emitter electrode is sufficiently slack, curved or coiled such that its length is at least fifteen percent greater than said distance.

21. (Previously Presented): A device for conditioning air including

a housing with an air inlet and an air outlet

a means for emitting ions having a length that is at least fifteen percent greater than a distance that the means spans;

a collector electrode;

said means for emitting ions is located closer to said air inlet than is said collector electrode;

said collector electrode located closer to said air outlet than is said means for emitting ions; and

a potential generator electrically coupled to the means for emitting ions and the collector electrode in order, when energized, to create a flow of air in a downstream direction from the means for emitting ions to the collector electrode.

22. (Previously Presented): The generator of claim 1 wherein when said voltage generator is energized, ions are generated at said means for emitting ions and directed toward said collector electrode.

23. (Previously Presented): The ion generator of claim 1 wherein said collector electrode is removable by a user for cleaning.

24. (Previously Presented): The generator of claim 1 wherein said generator is incorporated in a housing, and said housing comprises an electro-kinetic air transporter-conditioner.

25. (Previously Presented): The generator of claim 1 wherein said generator is incorporated in a housing and, said housing comprises an electro-kinetic air transporter-conditioner and said housing has a top and said collector electrode is removable from said top for cleaning.

26. (Previously Presented): The generator of claim 1 wherein:

said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said collector electrode is elongated and is removable from said top of said housing.

27. (Previously Presented): The generator of claim 1 wherein:

said generator is incorporated in an elongated housing with a top and, said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said collector electrode is elongated and is at least partially removable from said top of said housing.

28. (Previously Presented): The generator of claim 1 wherein:

said generator is incorporated in an elongated freestanding housing with a top, and said housing comprises an electro-kinetic air transporter-conditioner; and

wherein said collector electrode is elongated and is telescopingly removable through said top of said housing.

29. (Previously Presented): A device for conditioning air, comprising:

a housing having an inlet and an outlet;

an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

an ion emitter electrode that spans a distance within said housing, said ion emitter electrode created from a wire-shaped element, and formed into a coil-shape such that a length of said ion emitter electrode is at least fifteen percent greater than said distance;

a collector electrode located downstream of said ion emitter electrode;

a high voltage generator electrically coupled to said ion emitter and collector electrode.

30. (Previously Presented): The device as recited in claim 29, wherein said wire-shaped element has a length two to three times greater than said distance that said ion emitter electrode spans.

31. (Original): The device as recited in claim 29, wherein the diameter of said coil-shape is approximately ten times greater than the diameter of said wire-shaped element.

32. (Previously Presented): The device as recited in claim 29, wherein said ion emitter electrode is an ion emitting surface, that can electrically charge particles contained within the airflow.

33. (Previously Presented): The device as recited in claim 29, wherein said collector electrode has a polarity opposite of said ion emitter electrode, which collector electrode collects the electrically charged particles.

34. (Previously Presented): A device for conditioning air, comprising:

a housing having an inlet and an outlet;

an ion generator disposed within said housing, that creates an airflow in a downstream direction, when energized, from said inlet to said outlet, including:

an ion emitter electrode that spans a distance within said housing, said ion emitter electrode created from a wire shaped element, and formed into a curved configuration such that a length of said ion emitter electrode is at least fifteen percent greater than said distance;

a collector electrode located downstream of said first electrode;

a high voltage generator electrically coupled to said ion emitter and collector electrode.

35. (Canceled):

36. (Previously Presented): The device as recited in claim 34, wherein said ion emitter electrode is an ion emitting surface that can electrically charge particles contained within the airflow.

37. (Previously Presented): The device of claim 21 wherein said housing has as top and said collector electrode is removable through said top.

38. (Previously Presented): The device of claim 21 wherein said housing is an elongated freestanding housing with a top and said collector electrode is removable through said top of said housing.

39. (Previously Presented): The device of claim 21 wherein said housing is an elongated housing with a top and said collector electrode is removable through said top of said housing.

40. (Previously Presented): The device as recited in claim 36, wherein said collector electrode has a polarity opposite of said ion emitter electrode, which collector electrode can collect the electrically charged particles.

41. (Previously Presented): An ion generator comprising:

an ion emitter electrode that spans a distance;

at least two collector electrodes that each include a substantially flat surface, each substantially flat surface being substantially parallel to one another; and

a voltage generator to provide a potential difference between said ion emitter electrode and said collector electrodes;

wherein said ion emitter electrode has a plurality of curves that cause a length of said ion emitter electrode to be longer than said distance, said plurality of curves being in a same plane, said plane being parallel to said substantially flat surfaces of said collector electrodes.